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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,293	06/25/2003	Harnmeet Singh	LAM2P410	4867

7590 10/26/2005

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EXAMINER

KORNAKOV, MICHAIL

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,293

Applicant(s)

SINGH ET AL.

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 15,17 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15,17 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' amendment dated 08/08/2005, has overcome objections to claims 1-16, rejections of claims 15,16,18 under 35 U.S.C. 102(b) as being anticipated by Murugesh et al (U.S. 5,811,356), rejections of claims 15,16,18,19 under 35 U.S.C. 102(e) as being anticipated by Ho et al (U.S. 6,790,374), rejection of claim 17 under 35 U.S.C. 103(a) as being unpatentable over Ho et al (U.S. 6,790,374), rejection of claim 17 under 35 U.S.C. 103(a) as being unpatentable over Muguresh et al. in view of Williams et al (U.S. 5,647,953) and the indicated objections and rejections are withdrawn.
2. Claims 15, 17, 19-25 are pending and examined on the merits.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The abstract of the disclosure stands objected to because it recites "A **method** for providing substantially similar chamber condition", however the instant claims are related to processing chamber. Applicants are also reminded of the proper format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. Therefore, appropriate correction of the Abstract is required. See MPEP § 608.01(b).

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5. Claim 22 is objected to because of the following informalities: claim 22 recites "The semiconductor processing chamber of **claim 1**". However, claim 1 was cancelled by Applicants. Therefore, appropriate correction is required. For examination purposes it is assumed that claim 22 depends on claim 15.

6. Claims 15, 17, 19 stand and newly added claims 20-22, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Koemtzopoulos et al (U.S. 6,071,573).

Koemtzopoulos teaches TCPTM reactor comprising a top electrode in communication with RF power supply; a base; side walls; a continuous top window, disposed on side walls and allowing energy from the top electrode to pass through; an outlet port; an electrostatic chuck for supporting the substrate and being in communication with power supply. The inner surface of the processing chamber is covered by removable fluorine doped silicon dioxide containing coating. The thickness of the coating is in the range 2000Å – 2 μm (col.3, lines 22-29; col.3, lines 5-36,53-56; col.6, lines 20-23; col.7, lines 58-65; col.8, lines 42-45). The interior surfaces of the chamber can be made of ceramic materials such as alumina, anodized coatings, silicon nitride, etc., metals such as aluminum, stainless steel, etc., quartz and other dielectric materials (col.6, lines 12-15). Therefore, all the limitations of the instant claims are explicitly met by Koemtzopoulos.

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7. Claims 23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Koemtzopoulos et al (U.S. 6,071,573).

While teaching silicon containing coating composed of silicon, oxygen and fluorine, Koemtzopoulos remains silent about silicon containing coating containing silicon, oxygen and chlorine or bromine. However, closely related homologs and analogs in chemistry may create a prima facie case of obviousness, consult *In re Dillon* 16 USPQ 2d 1897, 1904 (Fed. Cir. 1990); *In re Payne* 203 USPQ 245 (CCPA 1979); *In re Mills* 126 USPQ 513 (CCPA 1960); *In re Henze* 85 USPQ 261 (CCPA 1950); *In re Hass* 60 USPQ 544 (CCPA 1944). Furthermore, one skilled in the art would have found obvious to utilize chlorine or bromine as an ingredient of silicon containing chamber coating in lieu of fluorine while processing substrates or cleaning the processing chamber of Koemtzopoulos, wherein chlorine or bromine containing reactive ingredients are employed in order to avoid contamination of the substrate with fluorine containing species.

Response to Arguments

8. Applicant's arguments filed 08/08/2005 have been fully considered but they are not persuasive. Applicants argue that the features of the top electrode disposed over and isolated from the processing chamber and the top of the processing chamber being a window allowing energy from the top electrode to pass therethrough are not taught or disclosed by the cited references. Applicants' attention is drawn to Koemtzopoulos et al (U.S. 6,071,573), wherein such limitations are fully addressed, as described in the instant office action.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

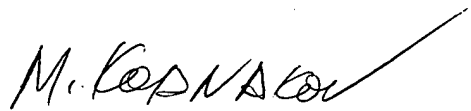
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M. Kornakov", with a long, sweeping horizontal line extending to the right.

Michael Kornakov
Primary Examiner
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10/24/2005